

the rim. To determine the number of cycles

Card 1/2

L 33929-65

ACCESSION NR: AP4049935

0

was chosen for the above-mentioned engine, and the temperature course along the disk radius was measured for this characteristic flight program. The results of the study show that for a given type of turbojet engine a greater number of pressure-tension cycles can originate in the rim of the disk than is given in the published literature. Inasmuch as the author determined the number of pressure-tension cycles in the rim of the disk corresponding to the characteristic flight cycle for the given engine, it is easy to determine the number of cycles for the required

Card 2/2

STREJCEK, J.

The Morava L-200 airplane at the 3d Exhibition of the Machinery Industry.

p. 590 (Kridla Vlasti, no. 19, Sept. 1957. Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

STREJCEK, Jaromir, inz.

Research ensures the technical development of civil air lines. Letecký
obzor 6 no.2:33 '62,

STREJCEK, Jaromir, dr. (Prague 6-Petriny, Krasneho 3)

A new species of the genus *Bocchus* Ashm. (Hym., Dryinidae)
in Czechoslovakia. Cas entom 61 no.4:323-326 0 '64.

1. Czechoslovak Entomological Society, Prague. Submitted
March 11, 1964.

STREJCEK, J.

SCIENCE

Periodicals: Ceskoslovenska spolecnost entomologicka CASOPIS. ACTA
SOCIETATIS ENTOMOLOGICAE CECOSLOVENIAE. Vol. 52, 1955

STREJCEK, J. Beetles of the Erzgebirge area and the region of the
highlands of Central Bohemia. p. 181.

Monthly List of East European Accessions (EEAI) LC, Vol. No. 5,
May 1959, Unclass.

J. STOLJCEK

The importance of the haematocrite values in the classification of the anaemias of childhood. *Pediat. listy*, 5:2, Mar.-Apr. 50. p. 86-89

1. Of the Children's Clinic in Olomouc.

CLML 19, 5, Nov., 1950

STREJCEK, J.

Indication for spinal administration of antibiotics in suppurative meningitis. *Pediat. listy*, Praha 7 no. 3:162-165 May-June 1952.
(CLML 22:4)

1. Of the Pediatric Clinic of Palacky University in Olomouc.

SCHUCK, O.; ANDRYSEK, O.; SNAHELOVA, R.; STRIBNA, J.; STREJCEK, J.

Recent views on disorders of the concentration activity of the
kidney in chronic renal diseases. Sborn. lek. 63 no.11:337-344, N
'61.

(KIDNEY DISEASES)

STREJCEK, Jiri

Rheumatoid factor. Cas.lek.cesk 100 no.20:Lek Veda Zahr:97-106
19 My '61.

1. I. interni klinika lekarske fakulty KU v Praze, prednosta prof.
MUDr. V. Hoenig.

(ARTHRITIS RHEUMATOID immunol)

STREJCEK, Jiri

L.E. factor. Cas. lek. cesk. 101 no.42:Lek Veda Zahr: 208-213 19
0 '62.

1. I. interni klinika fakulty vseobecneho lekarstvi KU v Praze,
prednosta prof. dr. V. Hoenig, DrSc.
(LUPUS ERYTHEMATOSUS SYSTEMIC)

CZECHOSLOVAKIA

J. STREJCEK and V. HOENIG, First Internal Medicine Clinic of the
~~Faculty of General Medicine of Charles University (I. interni klinika~~
fakulty všeobecného lékařství Karlovy University, Head (prednosta) Prof
Dr V. HOENIG, DrSc; Prague.

"Chronic Hepatitides Reminiscent of Lupus Erythematosus Disseminatus."

Prague, Casopis Lekaru Ceskych, Vol 102, No 20, 17 May 63; pp 537-540.

Abstract [English summary modified: Case report on 38-year-old female
teacher who had suffered with a multiplicity of hepatic complaints-
biliary colics, viral (?) hepatitis, digestive disturbances for the
past 6 years; severe arthritis eventually anti-liver antibody shown by
complement fixation and antinuclear factor by immunofluorescence; many
LE cells; disease is now quiescent under prednisone maintenance.
One immunofluorescence photomicrograph; 36 references: 2 Czech whereof
1 in press, 34 Western.

1/1

STREJCEK, J.

On the familial incidence of systemic lupus erythematosus. Cas.
lek.cesk. 102 no.51:1400-1403 20 D'63.

1. I. interni klinika fakulty vseobecneho lekarstvi KU v
Praze; prednosta: prof.dr. V.Hoenig. DrSc.

*

KRAMAR,J.; STREJCEK,J.; REJHOLEC,V.

Demonstration of the LE factor by the immunofluorescent method.
Cas.lek. cesk. 103 no.10:255-258 6 Mr.'64.

1. Parazitologicke oddeleni prirodovedecke fakulty KU v Praze
(vedouci: prof.RNDr.J.Kramar, CSs.); I.interni klinika fakulty
vseobecneho lekarstvi KU v Praze (prednosta:prof.dr. V.Hoenig,
DrSc.) a Revmatologicke oddeleni polikliniky KUNZ Praha (ve-
douci: MUDr. V. Rejholet, CSs.)

*

STREJCEK, J.

Genealogical study of lupus erythematosus disseminatus. Acta
univ. Carol. [med] (Praha):Suppl. 18: 185-192 '64.

1. I. interni klinika fakulty vseobecneho lekar-tvi University
Karlovy v Praze (prednosta: prof. dr. V. Hoenig).

STEJSKAL, J.; STREJCEK, J.

Parathyrotoxic crisis. Cas. lek. cesk. 103 no.23:621-626
5 Ja'64

1. Hlavny I. patologickoanatomicky ustav fakulty vseobecneho
lekarstvi KU [Karlovy university] v Praze (prednosta: prof.
dr. B.Bednar, DrSc) a I. interní klinika fakulty vseobecneho
lekarstvi KU [Karlovy university] v Praze (prednosta: prof.
dr. V.Hoenig, DrSc.).

PROKOP, M.; KUBICKA, A.; STRECH, J.

Effect of serum iron and copper and total binding capacity of the serum for iron in relation to the activity of progressive polyarthritis. Cas. lek. cesk. 103 no.45:1242-1246 6 N '64.

Interní klinika fakulty všeobecného lékařství Karlovy
Univerzity v Praze a Vedeckovýzkumná laborator pro patofyziologii
aktivního a pasivního železa Interní klinice v Praze, (prednosta
prof. M. Prokop, doc. J. Strech a revmatologické oddělení fakultní
polykliniky, prof. J. Kubická) Moravské zdravotní v Praze, (vedoucí
MUDr. J. Prokop, ČSČ)

URBANOVÁ, D.; STEDICEK, J.; FRAGNER, F.

Generalized cryptococcosis. Cas. lek. cesk. 104 no.10:271-272
12 Mr 1965.

I. I. patologickeoanatomicky ustav fakulty vseobecneho lekarstvi
Karlovy University v Praze (prednosta: prof. dr. E. Bednar,
DrSc); I. interni klinika fakulty vseobecneho lekarstvi Karlovy
University v Praze (prednosta: prof. dr. V. Roening, DrSc.)
a Hygienicko-epidemiologicke stanice Krajskeho narodniho vyboru
Stredoceskeho kraje (reditelka MUDr. M. Rejskova).

STREJCEK, J.

Genealogical study of disseminated lupus erythematosus.
Cas. lek. cesk. 104 no.30:821-824 23 J1 '65.

1. I. interni klinika fakulty vseobecneho lekarstvi Karlovy
University v Praze (prednosta prof. dr. V. Hoenig, DrSc.).

STREJCEK, J.; HEDKOVA, M.

Relation of hydantoin preparations to the development of disseminated lupus erythematosus. Cas. lek. Cesk. 104 no.42: 1158-1161 22 0 '65.

1. I. interni klinika fakulty vseobecneho lekarstvi Karlovy University v Praze (prednosta prof. dr. V. Hoenig, DrSc.) a Fyziologicky ustav Ceskoslovenske akademie ved v Praze (prednosta prof. dr. Z. Servit, DrSc). Submitted November 1964.

CZECHOSLOVAKIA

STREJCEK, J.; 1st Internal Clinic, Faculty of General Medicine, Charles University (I. Interni Klinika Fakulty Vseobecneho Lekarstvi KU), Prague, Head (Prednosta) Prof Dr V. HOENIG.

"Recent Development in the Knowledge Concerning the Thymus."

Prague, Gasopis Lekaru Ceskych, Vol 105, No 33, 19 Aug 66, Lekarska Veda v Zahranici, pp 145 - 151

Abstract: The thymus in new born mice, wasting syndrome and adaptive immunoparesis are discussed. The thymus and the runt disease, the function of the thymus in adult mice, thymus and oncogenesis, the development of adaptive immunity and the phylogenesis of the thymus are described. Thymus in birds, its function in the immunocompetent system, immunological tolerance and the relationship of the thymus and clinical aspects of certain diseases are discussed. 120 Western references. (Manuscript received 3 Jun 65).

1/1

Dr. K. STREJCEK, K.

BJ 1-B Materials Handling

Fitting of consumer gas meters by means of S-shaped connecting
pieces. K. Strejcek and F. Bata (Praha, 1966, No. 142—144).—An
S-shaped connecting piece introduced by the Central Moravian Gas
Works permits of the fitting of meters to pipes of different diam more
economically than do the usual methods. R. THURCOS.

STREJCEK, Jiri

Czechoslovakia

First Internal/Medicine/Clinic KU (I. vnitřní klinika KU
v Praze) Prague 2, U Nemocnice 2; Director: V. HOENIG, MD, ScD.

Brno, Vnitřní lékařství, No 10, Oct 62, pp 1087-1094.

"The Influence of Chlorothiazid on the Excretion of Uric
Acid by the Kidney."

Strejček, O.

4660* Patent Searching—A Method Contributing to Manufacturing Economy. Patentová rešerše—cesta k zhušpodár-
nění výroby. (Czech.) O. Strejček. Strojrenstvi, v. 5, no. 12,
Dec. 1955, p. 938-940.

Patent searches for a given purpose concerning the state of
techniques, for new discoveries, validity of patents, and infringe-
ments. Czech, Soviet, and English practices. Diagram. 5 ref.

STREJCEK, O.

Oil heating for buses.

p. 388 (AUTOMOBIL) Vol. 1, no.11, Nov. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

STREJCEK, O.

Servomechanisms as an aid for automobile drivers.

P. 6, (Motoristická Současnost) Vol. 3, No. 1, Feb. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 7, NO. 1, JAN. 1958

STEFANIA, A.V.

Carbohydrate metabolism in tonicity and contracture.
A. V. Stefania (Lenin. M. Med. Univ., Leningrad, U.S.S.R.). *Proc. 1st Int. Conf. Glycolysis*, 1964, p. 101. — In one series of experiments were made of glycolysis in physiol. tonus or contracture muscular activity (tetanus, tonus) as well as in contracture brought about by 1% KCl. Gastrocnemius frog nerve-muscle prep. was used. In another series glycolysis was studied under conditions of muscular clench, contractures with isolated gastrocnemius frog muscle. In the initial phases of muscular tetanus, tonicity and contracture there appears no fundamental difference in the carbohydrate metabolism. Tonic contractions and contractures as well as tetanus are similarly accompanied by a glycolytic breakdown. In prolonged tetanus there is a further increase in the process of glycolysis. In tonus and contracture under similar conditions there is a lowering of glycolysis. It is assumed that in muscular activity accompanied by tonicity and contracture biochem. processes other than glycolysis take place.

B. S. Levine

Chair Gen. Biology

RALL', Yu.M.; KIYANOVA, V.S.; ~~STRELINA, T.D.~~

Observations of rodents in irrigated fields in Rostov Province. Zool.zhur. 33 no. 6:1390-1395 N-D '54. (MIRA 8:2)

1. Rostevskiy gosudarstvennyy universitet im. V.M.Molotova.
(Rostov Province--Rodentia)

СИЛЫ ИЛИ

EXCERPTA MEDICA Sec.2 Vol.9/8 Physiology, etc. Aug56

3340. STRELINA A.V. *Development of carbonic anhydrase activity in vertebrates (Russian text) DOKLADY AKAD. NAUK. SSSR 1955, 104/3 (444-447) Tables 3

Considered phylogenetically, the dehydrating activity of carbonic anhydrase is mainly in evidence in lower vertebrates, while in higher vertebrates and especially in mammals the hydrating activity comes more to the fore. This points to the importance of considering both of the reversible phases of carbonic anhydrase action: $\text{CO}_2 + \text{H}_2\text{O} \rightleftharpoons \text{H}_2\text{CO}_3$; $\text{CO}_2 + \text{OH} \rightleftharpoons \text{HCO}_3$. Eggers Lura - Holbaek

STRELINA A.V.
EXCERPTA MEDICA Sec.2 Vol.9/10 Physiology, etc. Oct56

4715. STRELINA A.V. Chair of Biol., Med. Stomatol. Inst., Leningrad. *Cholinesterase activity and acetylcholine sensitivity in muscles during inactivation contracture (Russian text)
FIZIOL. Z. 1956, 42/4 (410-414) Tables 3

The left leg of white rats was immobilized in flexed position by a plaster cast from 1 week to 2 months. ChE activity, tested on the frog rectus abdominis, increased with the development of contracture produced by immobilization, together with an increased sensitivity to ACh, which is probably a contributing factor to the development of contracture in response to nerve impulses.

Simonson - Minneapolis, Minn.

Chair Biology, Leningrad Med-Stomatology Inst.

STRELINA, A.V.; IVANOV, I.I.; ZHUKOV, Ye.K.

Characteristics of contractile proteins in skeletal muscle fibers of various types. *Fiziol.zhur.* 43 no.4:351-357 Ap '57. (MLRA 10:10)

1. Kafedra biokhimii Leningradskogo pediatricheskogo meditsinskogo instituta i Laboratorii evolyutsionnoy fiziologii Leningradskogo gosudarstvennogo universiteta.

(MUSCLE PROTEINS,

contractile proteins in skeletal musc. fibers of various types (Rus))

S/078/61/006/001/016/019
B017/B054

AUTHORS: Krylov, Ye. I., Strelina, M. M.

TITLE: Praseodymium- and Neodymium Orthotantalates

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1,
pp. 235 - 236

TEXT: The authors studied the synthesis of praseodymium- and neodymium orthotantalates and the magnetic properties of these compounds. Chemically pure oxides of tantalum, praseodymium, and neodymium were used for the synthesis of orthotantalates. Equimolar mixtures of tantalum anhydride and praseodymium oxide, or neodymium oxide, respectively, were ground in an agate mortar, and subsequently heated in a corundum crucible to 1200°C for 30 hours. Table 1 gives compositions, colors, and densities of praseodymium- and neodymium orthotantalates. The compounds have the compositions PrTaO_4 and NdTaO_4 . The magnetic susceptibility of praseodymium- and neodymium orthotantalates was determined by L. Gouy's method (Ref.5); results are given in Table 2. In the temperature range of

Card 1/2

Praseodymium- and Neodymium Orthotantalates

S/078/61/006/001/016/019
B017/B054

78 - 290°K, these compounds are paramagnetic and follow Curie and Weiss's law. The effective magnetic moments determined agreed with those indicated in publications (Ref.7). G. A. Smolenskiy is mentioned. There are 2 tables and 7 references: 5 Soviet, 1 French, and 1 German. ✓

ASSOCIATION: Ural'skiy politekhnicheskii institut (Ural Polytechnic Institute)

SUBMITTED: April 25, 1960

Card 2/2

S/C78/62/007/004/005/016
B110/B101

AUTHORS: Krylov, Ye. I., Dmitriyev, I. A., Strelnina, K. M.
TITLE: Thermal decomposition of potassium- and sodium meta-niobate
PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 4, 1962, 803-806

TEXT: Composition and properties of the thermal decomposition products of sodium- and potassium meta-niobate were studied in vacuo. The aggregation of volatile dissociation products in the reaction zone was controlled in a vacuum unit by means of a McBain quartz spring balance (for K- and Na metals at $> 800^{\circ}\text{C}$) and by measuring the pressure with a $\Pi\text{T}-2$ (LT-2) manometer tube (for O_2). The alkali metals were condensed in a quartz tube. The bright coating was dissolved in aqua dest, and titrated with 0.1 N HCl. Tests were first conducted at $400-800^{\circ}\text{C}$ and $1 \cdot 10^{-4}$ mm Hg. Pure O_2 was separated in the decomposition of NaNbO_3 in Pt-, Ta- and quartz vessels. The rate of separation was in the sequence $\text{Ta} > \text{quartz} > \text{Pt}$. Further experiments were, therefore, conducted in Ta vessels saturated with O_2 . A KNbO_3 weighed portion was heated for several hours at 750°C , until constant oxygen pressure was established. The reaction vessel was cooled to room

Card 1/2

S/078/62/007/004/005/016
B110/B101

Thermal decomposition of ...

temperature and the oxygen pressure was lowered to $1 \cdot 10^{-4}$ mm Hg. Decrease of the equilibrium pressure of O_2 proves that the system is bivariant and possesses two degrees of freedom (temperature and concentration of the solid decomposition product in the initial meta-borate). No new phase was formed in the decomposition of $KNbO_3$ at $400-750^\circ C$, as it is only impoverished in O_2 . Niobium bronze is formed with good conductivity, slight paramagnetism, and alkali- and acid resistance. $NaNbO_3$ and $KNbO_3$ decompose at $> 750^\circ C$ under separation of alkali metals, the degree of decomposition increasing with the temperature. $KNbO_3$ decomposes more easily than $NaNbO_3$. The color changes from greenish-blue at $750-800^\circ C$ towards black at $1200^\circ C$. The residue was investigated roentgenographically. A great number of lines proves here the presence of NbO_2 . The origin of the remaining lines has not yet been explained. There are 2 figures and 4 tables.

ASSOCIATION: Ural'skiy politekhnicheskii institut im. S. M. Kirova
(Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: April 7, 1961

Card 2/2

L 29616-66 EWT(m)/ENP(t)/ETI IJP(c) JD

ACC NR: AP6011319

SOURCE CODE: UR/0363/66/002/003/0507/0510

AUTHOR: Zobnina, A. N.; Kislyakov, I. P.; Strelina, N. V.

32
B

ORG: Moscow Institute of Precision Chemical Technology im. M. V. Lomonosova
(Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Conditions attending the formation of zinc molybdate, 7

SOURCE: AN SSSR. Izvestiya, Neorganicheskiye materialy, v. 2, no. 3, 1966, 507-510

TOPIC TAGS: zinc, molybdenum, zinc compound, molybdate

ABSTRACT: The conditions of precipitation of zinc molybdate from aqueous solutions containing molybdate and zinc ions were determined by the potentiometric titration technique. The precipitation experiments were conducted at 22°-100°C with a solution pH of 4.36 to 6.2 for 18-144 hours. A standard calomel electrode served as a reference and a glass electrode was used as an indicator. The compositions of the precipitates and solutions were determined chemically. The solutions were prepared from chemically pure grade $\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ and $\text{Na}_2\text{MoO}_4 \cdot 2\text{H}_2\text{O}$. It was found that regular zinc molybdate (ZnMoO_4) precipitates in the 5.0-6.0 pH range. At pH>6 the

Card 1/2

UDC: 546.47'776

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ZnMoO_4 - $\text{Zn}(\text{OH})_2$ mixture precipitates and at $\text{pH} < 5.0$ a mixture of ZnMoO_4 and isopoly-salts precipitates. It is possible that the ZnMoO_4 formation occurs via isopolysalt intermediates. Increased temperature and longer precipitation duration lead to better structure and less water content in the precipitate. At $278^\circ \pm 10^\circ \text{C}$ $\text{ZnMoO}_4 \cdot 2\text{H}_2\text{O}$ becomes anhydrous. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 12Jun65/ ORIG REF: 000/ OTH REF: 006

Card 2/2

CC

STRELINSKA, T. M.

STRELINSKA, T. M. "Clinic and Diagnosis of Tumors of the Pons Varolii." Cand Med Sci, Acad Med Sci USSR, 13 Jan 54. (Vechernyaya Moskva, 4 Jan 54)

SO: SUM 168, 22 July 1954

P/046/62/007/003/002/008
D256/D308

AUTHORS: Yakovlev, Yu.V. and Streliński, S.
TITLE: Determination of contaminations in pure phosphorus
using neutron activation and gamma-ray spectroscopy
PERIODICAL: Mikhleonika, v. 7, no. 3, 1962, 141-151

TEXT: The described method of impurity determination was developed in order to avoid troublesome chemical separation after the irradiation of the phosphorus; the latter becomes strongly active under thermal bombardment with a half-life period of 14.5 days. The impurities of arsenic, manganese and gallium in samples of spectrally pure and "extra pure" phosphorus were determined using a NaI(Tl)-crystal gamma-ray spectrometer with a 100-channel pulse-height analyzer. The contents of the arsenic impurity was determined from the obtained gamma-spectra by integration of the photo-peaks, and an extrapolation method is described used to estimate the impurities of manganese and gallium. There are 4 figures and 4 tables.

Card 1/2

Determination of ...

P/046/62/007/003/002/008
D256/D308

ASSOCIATION: Yakovlev: Institut geokhimii i analiticheskoy khimii
AN, SSSR, Dubna (Institute of Geochemistry and Anal-
ytical Chemistry AS USSR, Dubna); Strelinski: Insty-
tut badań jądrowych, PAN, Warszawa, Dzieł chemii
analitycznej (Institute of Nuclear Research, PAS,
Warsaw, Department of Analytical Chemistry) ✓

SUBMITTED: February, 1962

Card 2/2

PARKAS, Lorand, Jr. (Budapest, XI., Gellert ter 4); VARADY, Jozsef (Budapest, XI., Gellert ter 4); MAJOR, Adam (Budapest, XI., Gellert ter 4); GOTTFREDEN, Arnes (Budapest, XI., Gellert ter 4); STEELISKY, Janos (Budapest, XI., Gellert ter 4)

Ring isomerization of flavones and isoflavones by means of potassium ethylate. Periodica polytechn chem 8 no.3:177-182 '64.

1. Chair of Organic Chemistry of Budapest Technical University.
Submitted February 6, 1964.

10. 11. 11

BAKAI, Lorand, LÁTOR, Adam, JTHALLATY, János; Lendületi Egyetem
of Budapest, Department of Organic Chemistry (Budapesti Műszaki Egyetem,
Győr-Ménfőcsanak).

Main: Isomerization of Flavones, I. Conversion of 7-Methyl Veronin into
7-Methyl Oroxylin."

Budapest, Magyar Kémiai Folyóirat, Vol 69, No 2, Aug 1969, pages 363-365.

Abstract: [Authors' Hungarian summary] The benzyl derivative of 5-hydroxy-
7,8-dimethoxy-flavone, 5-benzyl-7,8-dimethoxy-flavone, reacts with
potassium ethylate to form 2-hydroxy-2,6-dimethoxy-8-benzyl-1-methoxy-
methane. This compound, on catalytic debenzylation and subsequent heating
in vacuo, loses water and the product, 5-hydroxy-6,7-dimethoxy-flavone,
that is, 7-methyl-oroxylin A is obtained. All Western references.

1/1

STRELITS, Sh.

Maximum modulus of analytic functions. Usp.mat.nauk 10 no.4:
153-160 '55. (MLRA 9:1)

(Functions, Analytic)

STRELITS, Sh.I.

Connection between typical real functions and univalent functions.
Usp.mat.nauk 12 no.3:211-220 My-Je '57. (MIRA 10:10)
(Functions, Analytic)

AUTHOR: Strelits, Sh.I. (Vil'nyus) SOV/39-46-4-5/6
TITLE: On the Increase of the Solutions of Second Order Linear
Differential Equations (O roste resheniy lineynykh
differentsial'nykh uravneniy vtorogo poryadka)
PERIODICAL: Matematicheskiy sbornik, 1958, Vol 46, Nr 4, pp 433-450 (USSR)
ABSTRACT: The author considers the increase of the solution of
(1) $w'' + P(z)w' + Q(z)w = 0$
in the neighborhood of the singular point. He does not in-
vestigate the classical case of Fuchs but the case of an
essentially singular point. The author distinguishes several
cases and he proposes a method suitable also for the in-
vestigation of other questions; e.g. he answers the question
for the conditions which have to be satisfied by (1) in order
that there exists a solution the Taylor expansion of which
has real coefficients in a point of the real axis.
There are 4 references, 2 of which are Soviet, and 2 German.
SUBMITTED: April 29, 1957

Card 1/1

88210

S/020/60/134/002/035/041XX
C 111/ C 333

16.2600

AUTHOR: Strelits, Sh. J.

TITLE: The Wiman-Valiron Theorem for Entire Functions of Several Variables

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 2, pp. 286-288

TEXT: Let

(1) $u = F(z_1, z_2, \dots, z_n) = \sum_{i_1, i_2, \dots, i_n=0}^{\infty} a_{i_1, i_2, \dots, i_n} z_1^{i_1} z_2^{i_2} \dots z_n^{i_n}$

be an entire transcendental function; let $S_m(R) = |z_1|^m + |z_2|^m + \dots$

$+ |z_n|^m = R^m$, $m > 0$ integer, be a hypersurface;

(2) $M(R, F) = M(R) = \max_{S_m(R)} |F(z_1, z_2, \dots, z_n)|$.

Let $F(z_1, z_2, \dots, z_n) = \sum_{k=0}^{\infty} A_k(z_1, z_2, \dots, z_n)$, where A_k are homogeneous functions of k -th degree, be the diagonal representation of (1). Let $B_{k\infty} = \max_{S_m(1)} |A_k(z_1, z_2, \dots, z_n)|$, and

(3) $h(z) = \sum_{n=0}^{\infty} B_n z^n$

Card 1/5

88210

S/020/60/134/002/035/041XX
C 111/ C 333

The Wiman-Valiron Theorem for Entire Functions of Several Variables and $\nu(R)$ the central index of $h(z)$. Let $\xi_1, \xi_2, \dots, \xi_n$ be the point where (2) attains its maximum; $\xi_j = r_j(R) e^{i\varphi_j(R)}$, $j = 1, 2, \dots, n$.

Theorem 1: For arbitrary nonnegative integers i_j it holds

$$(4) \lim_{R \rightarrow \infty} \left(\frac{\xi_1^{i_1} \xi_2^{i_2} \dots \xi_n^{i_n} \frac{\partial^{i_1 + \dots + i_n}}{\partial z_1^{i_1} \dots \partial z_n^{i_n}} F(\xi_1, \dots, \xi_n)}{\nu^{i_1 + \dots + i_n}(R) F(\xi_1, \xi_2, \dots, \xi_n)} - \left(\frac{r_1}{R}\right)^{i_1} \dots \left(\frac{r_n}{R}\right)^{i_n} \right) = 0,$$

where $F(z_1, z_2, \dots, z_n)$ is an entire transcendental function, $r_j = r_j(R)$, and where for the limit passage there must be eventually excluded a set of non-intersecting intervals of the axis R of finite logarithmic measure.

Definition: real function $y = y(x)$, $x_1 \leq x \leq x_2$ is called an
Card 2/5

88210

S/020/60/134/002/035/041XX
C 111/ C 333

The Wiman-Valiron Theorem for Entire Functions of Several Variables

algebroidal arc, if $y(x)$ is analytic in the interior of $[x_1, x_2]$ and can possess only algebraic singularities at the ends.

Theorem 2: The functions $M(R)$, $r_j(R)$, $\varphi_j(R)$, $j = 1, 2, \dots, n$ are piecewise algebroidal, i. e. on every finite interval $R_1 \leq R \leq R_2$ they consist of a finite number of algebroidal arcs.

Theorem 3:

$$(5) \quad \lim_{R \rightarrow \infty} \frac{RM'(R)}{\sqrt{(R)M(R)}} = 1,$$

where for the limit passage there must be eventually omitted a set of non-intersecting intervals of the R -axis of finite logarithmic measure.

The theorems are used for investigating the increase of the solutions can be represented in the form

$$(6) \quad z_1^{\lambda_1} z_2^{\lambda_2} \dots z_n^{\lambda_n} F(z_1, z_2, \dots, z_n).$$

Card 3/5

88210

S/020/60/134/002/035/041XX
C 111/ C 333

The Wiman-Valiron Theorem for Entire Functions of Several Variables

The order of (6) is here identified with the order of growth of $M(R, F)$.

Theorem 4: If the homogeneous form

$\sum_{j_1 + \dots + j_n = q} a_{j_1 \dots j_n} \eta_1^{j_1} \dots \eta_n^{j_n}$
on $S_m(1)$ is different from zero for nonnegative $\eta_1, \eta_2, \dots, \eta_n$,
then each solution of the kind (6) of

$$(8) \quad \sum_{j_1 + \dots + j_n = q} a_{j_1 j_2 \dots j_n} (z_1 p_1)^{j_1} (z_2 p_2)^{j_2} \dots (z_n p_n)^{j_n} +$$

$$H_1(z_1, z_2, \dots, z_n, u, z_1 p_1, z_2 p_2, \dots, z_n p_n) = 0$$

where $p_j = \frac{\partial u}{\partial z_j}$, has a finite order which is not greater than a number ρ equal for all solutions of this equation.

Card 4/5

88210

S/020/60/134/002/035/041XX
C 111/ C 333

The Wiman-Valiron Theorem for Entire Functions of Several Variables

Theorems 5 and 6 give similar statements for another differential equation.

There are 4 references: 3 Soviet and 1 French.

PRESENTED: April 30, 1960, by V. J. Smirnov, Academician

SUBMITTED: April 28, 1960

X

Card 5/5

STRELITS, Sh.I. (Vil'nyus)

Growth of nonsingle-valued solutions of ordinary differential
equations. Mat.sbor. 53 no.2:159-194 F '61. (MIRA 14:5)
(Differential equations)

STRELITS, Sh.I. (Vil'nyus)

Analogs of certain oscillation theorems. Mat. s bor. ~~54~~ no.3:
385-396 J1 '61. (MIRA 14:8)
(Mathematical analysis)

STRELITS, Sh.I. (Vil'nyas)

Maximum modulus of an analytic function of several variables. Mat.
sbor. 57 no.3:281-296 J1 '62. (MIRA 15:8)
(Functions of several variables)

STRELITS, Sh.I. (Vil'nyus)

Viman-Valiron's theorem for entire functions of several
complex variables. Mat. sbor. 58 no.1:47-64 S '62.
(MIRA 15:9)

(Functions of complex variables)

STRELITS, Sh.I.

Relations for derivatives at the points of maximum absolute value of an integral transcendental function of several complex variables. Dokl.AN SSSR 145 no.4:737-740 Ag '62. (MIRA 15:7)

1. Predstavleno akademikom V.I.Smirnovym.
(Functions of complex variables) (Maxima and minima)

STRELITS, Sh.I. (Vil'nyus)

An analogue of Fuks' GPO Manual p. 66 theorem for solutions to
linear partial equations. Mat.sbor. 60 no.2:121-130 F '63.

(MIRA 16:4)

(Differential equations, Partial)

STRELITS, Sh.I. (Vil'nyus)

Increase of integral solutions to partial differential equations.
Mat. sbor. 61 no.3:257-271 J1 '63. (MIRA 16:7)

(Differential equations, Partial)

HUBAC, M.;BORSKY, I.;STRELKA, F.

Calorie requirement in workers using motor hole-diggers. Cesk.
fysiol. 9 no.1:17-18 Ja 60.

1. Ustav hygieny prace a chorob z povolania, Bratislava.
(NUTRITION)

BORSKY, I.; HUBAC, M.; STRELKA, F.

Establishment of physiological data for the determination of efficiency standards in work with motor boring machines. Pracovní lek.12 no.10:520-523 D '60.

1. Ustav hygieny prace a chorob z povolania v Bratislave, riaditel
MUDr. I. Klucik.
(OCCUPATIONS AND PROFESSIONS)

STRELKA, F.; HUBAC, M.; BORSKY, I.

Calory requirement in men transporting various types of power
saws. Pracovni lek.13 no.1:15-17 P '61.

1. Ustav hygieny prace a chorob z povolania v Bratislave,
riaditel MUDr. I. Klucik.
(EXERTION)

STRELKA, F.; HUBAC, M.; DORSKY, I.; Technická spolupráca ŠUTORA, A.;
ZOHORSKY, J.; KOTLEBA, R.

The expenditure of energy in manual and mechanical bark stripping
operation. Prac. lek. 13 no.8/9:423-426 N '61.

1. Ustav hygieny prace a chorob z povolania v Bratislave, riaditel
MUDr. I. Klucik.

(EXERTION)

NOVA, M.; HUBAC, M.; STRELKA, F.

Relation of some somatic and dynamometric indicators to the age, sexual development, physical development and weight. Pracovni lek. 14 no.5:228-231 Je '62.

1. Ustav hygieny prace a chorob z povolania v Bratislave, riaditel Dr. I. Klucik.

(GROWTH) (BODY WEIGHT) (AGING)

HUBAC, Miloslav, M'Dr., CSc.; BORSKY, Imrich, promovany lekar;
STRELKA, Frantisek, promovany pedagog; STAREK, Eduard, inz.

Physiological analysis of the work with motor-driven hole
diggers. Les cas 9 no. 11: 1035-1048 N '63.

1. Ustav hygieny prace a chorob z povolani, Bratislava;
Vyskumny ustav lesneho hospodarstva, Banska Stiavnica,
Vyskumna stanica Oravsky Podzamok.

BORSKY, Imrich; HUBAC, Miloslav; STRELKA, Frantisek

Effect of statistical and dynamics loads on some physiological functions of the body. Part 1. Prac lek. 7 no.8:345-350 0 ' 65

1. Vyskumny ustav hygieny prace a chorob z povolania v Bratislave (riaditel - prof. dr. M. Nosal).

STRELKA, Josef, MUDr.; BZONEK, Jan, MUDr.

Toxic effect of neomycin. Cesk. otolar 7 no.6:364-367 Dec 57.

1. Otolaryngologická klinika UK v Bratislave, prednosta doc. MUDr.
Jan Laida. Otolaryngologická klinika MU v Brne, prednosta prof.
MUDr Frantisek Ninger.
(NEOMYCIN, tox. (Cz))

STRELKA, J.

A study trip to the German Democratic Republic. Cesk. otolar. 11
no.5:308-309 '62.

1. Klinika pre choroby usne, nosne a krcne Lekarskej fakulty Univerzity
Komenskeho v Bratislave, veduci doc. dr. J. Lajda.
(OTORHINOLARYNGOLOGY)

STRELAK, J.; MINAR, J.

Contribution to the anatomy of the rete canalis of the hypoglossal nerve and vertebral vein. Cesk. morf. 11 no.4:301-304 '63.

1. Katedra chorob usnych, nosnych a krcnych Lekarskej fakulty Univerzity Komenskeho v Bratislave, veduci doc. dr. J. Lajda a Katedra anatomie Lekarskej fakulty Univerzity Komenskeho, veduci dr. G. Cierny, ScC.

(HYPOGLOSSAL NERVE) (VEINS)
(VASOMOTOR SYSTEM) (ANATOMY)

STRELKA, J.

On the significance of anatomical variations in the cranial sinuses for cervical dissection. Cesk. otolaryng. 12 no.2: 77-84 Mr '63.

1. Otorinolaryngologická klinika Lekárskej fakulty UK v Bratislave, prednosta doc. dr. J. Lajda. Ustav patologickej anatomie Lekárskej fakulty UK v Bratislave, prednosta doc. dr. M. Brozman.

(CRANIAL SINUSES) (NECK) (JUGULAR VEIN)

STREIKA, J.; MOLNAR, A.; ONDREJICKA, J.

Contribution to surgical anatomy of the external auditory meatus.
Cesk. otolaryng. 14 no.5:272-276 0 '65.

1. Klinika pre choroby usne, nosne a krcne Lekarskej fakulty
University Komenskeho v Bratislave (prednosta: doc. dr. J. Lajda).

SPREDA, T.; MOYS, L.

Work with a portable laboratory for inkeries. p.94

PROFESSOR AVIN (Ministerstvo obravnavanja pravnosti) Praha

Vol. 4, no. 2, 1955

East European Accessions List

Vol. 5 No. 1

Jan. 1956

STRELKA, Vaclav

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Electronic Phenomena and
Spectra

②
The photoeffect on zinc. Vaclav Strelka (Inst. Tech.
Phys., Praha). Czechoslov. J. Phys. 3, 168-9 (1953) (in
Russian). The photoelec. threshold of Zn was lowered upon
admission of N and H (in contrast to O₂), but increased upon
prolonged discharge. The increase in work function in the
presence of N was attributed to endothermic surface
comps. The decrease could not be explained.

R. D. Misch

AB 9/2/54

CZECHOSLOVAKIA/ Electronics - Electron and Ion Emission

H-2

Doc Jour : Ref Zhur - Fizika, No 4, 1959, No 8660

Author : Strelka, Václav

Inst : Institute for Technical Physics, Czechoslovak Academy of Sciences, Prague, Czechoslovakia

Title : Concerning the Problem of Exoelectronic Emission from Thin Aluminum Layers

Orig. Pub : Czechosl. exsop. fys., 1958, 8, No 5, 588-589

Abstract : A preliminary communication on measurements of the external photoeffect and thermionic emission from thin films of aluminum, sputtered in vacuum. The measurement of the emission was carried out with a Geiger-Mueller counter in a mixture of argon with ethylene or ethyl alcohol. As the temperature was linearly increased from 20 to 250 C, at a rate of 13° per minute, three maxima were observed on each of the curves of thermionic emission and photoemission, and the maxima on the latter were shifted towards the lower temperatures. The author attributes this to the fact that

Cont : 1/2

06632

CZECH/37-59-5-8/13

AUTHOR: Střelka, Václav

TITLE: Apparatus for the Automatic Measurement of Small Emission
Currents and Some Correlated Quantities

PERIODICAL: Československý časopis pro fysiku, 1959, Nr 5,
pp 515 - 526

ABSTRACT: The apparatus described was constructed for the measurement
of the emission of electrons from the surface of solids as
a function of temperature, time, ambient pressure, sample
resistance, etc. The apparatus consisted essentially of
four parts:

- 1) Sensing devices for the various quantities.
- 2) Transducers changing the output of the sensing device
into electric signals.
- 3) A programming device controlling all the required
changes in parameters.
- 4) A recording device.

The temperature was measured by a thermocouple. The gas
pressure was measured by a differential manometer and its
readings were transformed into electrical signals by a

Card1/2

06632

Apparatus for the Automatic Measurement of Small Emission Currents
and Some Correlated Quantities

CZECH/37-59-5-8/13

photo-electric method. The emission current, between 10^{-18} and 10^{-16} A, was measured by a G-M counter and a series of Eccles-Jordan circuits. The time interval, over which the counts were taken, was adjustable and was governed by the programmer. The circuit is described in detail. A detailed description of two types of programmers is also given.

A multi-point recording millivoltmeter recorded altogether 6 variables with time intervals of 20 sec (120 sec for a full cycle of measurements). There are 12 figures and 2 Czech references.

ASSOCIATION: Ústav technické fyziky ČSAV, Praha
(Institute of Technical Physics of the Czechoslovak Ac.Sc.,
Prague)

SUBMITTED: February 9, 1959
Card 2/2

STRELA, VACLAY

4

Photoelectron emission from NaCl. Radko Seidl and Va-
clav Strela (Inst. Tech. Phys., Prague). Naturwissen-
schaften 47, 225 (1960).—The problem was studied by con-
 sidering the relation between the normal thermal emission of
 the electrons originally localized at the electron attachment
 centers and the thermostimulated photoelectron emission
 (TSPB). Measurements were made in an app. (Seidl, CA
 51, 11048) by x-irradiating artificial NaCl-monocrystals
 under linear temp. increase (about $10^{\circ}/\text{min.}$) or const.
 temp. TSPB was detd. in intervals of 15 sec. or more by
 alternating darkness and exposure to white or red light.
 Preliminary results and conclusions were given.
 Eduard A. Wulkow

30597
Z/037/61/000/006/003/004
E024/E135

2116000

AUTHOR.

Střelka, V.

TITLE:

A filter against ions

PERIODICAL:

Československý časopis pro fysiku, no.6, 1961, 489.492

TEXT:

In the measurement of exo-electron emission currents a Geiger counter is normally employed. In the present paper a filter is described, the purpose of which is to avoid undesirable effects due to ions, formed in the counter, hitting the surface of the emitter. The method chosen is based upon the different mobilities of electrons and ions in a gas. A grid is inserted between the side-window of the counter and the emitter. The voltage applied to the grid, relative to the cathode of the counter, is shown in Fig.2 as a function of time. If u_- and u_+ are the respective mobilities of electrons and positive ions, d is the distance between grid and cathode and E is the intensity of the electric field between grid and cathode, we choose τ such that

$$u_- E \tau_1 > d > u_+ E \tau_1$$

Ca: d 1/ 3

(1)

X

A filter against ions

617
Z/037/61/000/006/003/007
E024/E135

When the grid is slightly negative relative to the cathode, electrons from the more negative emitter will be transmitted into the counter, while the slower ions will remain in the volume between grid and cathode. To avoid their accumulation in this volume, r_2 must be chosen larger than r_1 so that the ions will be collected on the cathode. The actual apparatus constructed by the author used a gas filling consisting of 10 torr of ethyl alcohol + 40 torr of argon. Grid to cathode distance $d = 0.1$ mm, $E = 0.7$ Volt/cm, $1/(r_1 + r_2) = 10$ kc/sec, $r_1/r_2 = 2:3$. The efficiency of the measurement of the emission current was about 30% less than without a filter. The efficiency of the filter was tested by replacing the emitter by a metallic foil connected to an electrometer. Without the filter, 10^7 ions per counting pulse reached the electrometer. With the filter, the ion current could not be measured, i.e. less than 10^3 ions per pulse reached the electrometer. There are 2 figures and 2 references: 1 Soviet bloc and 1 non-Soviet bloc.

ASSOCIATION: Ustav technické fyziky (SAV, Praha
(Institute of Technical Physics, CSAV Prague)

Card 2/3

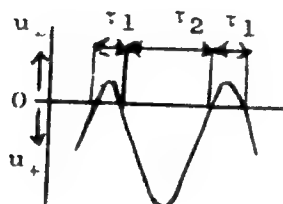
X

A filter against ions

SUBMITTED, January 17, 1961

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EO24/E135

Fig. 2



Card 3/3

X

S/194/62/000/006/171/232
D201/D308

AUTHORS: Seidl. R., and Střelka, V.

TITLE: Problem of Z-centers in exoelectronic emission of
alkali halide compounds

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 6, 1962, 45, abstract 6Zh297 (Chekhosl. fiz. zh.,
1961, B. 11, no. 11, 811-818)

TEXT: The changes with increasing temperature in the absorption spectrum of an X-ray irradiated NaCl crystal with Ca impurities were investigated using a high speed automatic recording installation. It is established that, when the crystal is heated, only the weakening of F-band is observed with the heating of the crystal and that there are no signs of appearance of Z-zones in the process of thermal discolouring. This contradicts the assumption of Bohun that the maximum at about 390°K of the thermally stimulated emission from NaCl - Ca corresponds to the destruction of Z-centers. The absence of the 460°K maximum, typical for NaCl in NaCl - Ca is explained by the authors by the fact that the destruction of F-centers

Card 1/2

Problem of Z-centers in ...

S/194/62/000/006/171/232
D201/D308

is caused by ion processes, the character of which changes when Ca is introduced. The possible character of the above processes is discussed. 16 references. [Abstracter's note: Complete translation.]

Card 2/2

ROUBINEK, Frantisek; SEIDL, Radko; STRELKA, Vaclav

Control device of universal laboratory automatic apparatus.
Cs cas fys 13 no.2:115-123 '63.

1. Ustav fyziky pevných látek, Československá akademie věd,
Praha.

STRELKIN, M. F.

The tin-containing pegmatites. M. F. Strelkin. *Hull. acad. sci. U. R. S. S., Str. geol.* 1938, No. 3, 465-80; *Khim. Referat. Zhur.* 2, No. 4, 41(1939). - A theory of the formation of cassiterite as a result of the hydrolysis of the alkali stannate, $\text{Na}_2\text{SnO}_3 + \text{H}_2\text{O} \rightarrow \text{SnO}_2 + 2\text{NaOH}$, is based on the lowered content of F in minerals contg. F or OH, on the paragenic interrelationship of the minerals of the deposits, and on the strongly developed process of albization of K feldspar by the NaOH solus, which are formed during the hydrolysis of stannates. The Sn-contg. pegmatites of the Turkestan ridge are connected with the granite intrusion which breaks through the Middle Paleozoic sedimentary formations. The pegmatic veins are represented by (1) schorlo-biotites, (2) schorlo-muscovites, and (3) albites which are Sn-bearing and which are subdivided into cleavelandite-spodumenes and into greisenized veins. W. R. Hem

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

STRELKIN, M.F.

Problem of the greisenization of granites. (In: Akademia nauk
SSSR. Voprosy petrografii i mineralogii. Moskva, 1953. Vol. 1,
p.84-102) (MLRA 7:4)
(Granite)

L 50100-65 EPA(s)-2 /EWT(m)/EFF(n)-2/T/EWP(t)/EWP(b)/EDA(c) Pu-4
 10P(c) WWH/ES/JD/WH/JG UR/553.061:546.79
 AM5014952 BOOK EXPLOITATION

Batalin, S. G.; Golovin, YE. A.; Zelencova, O. I.; Kashirtseva, M. V.;
 Kondrat'yeva, I. A.; Lisitsin, A. K.; Perel'man,
 A. I.; Sindel'nikova, V. D.; Chernikov, A. A.; Shmarlovich, YE. M.

Exogenous epigenetic deposits of uranium; formation conditions
 (Ekzonennyye epigeneticheskiye mestorozhdeniya urana; usloviya
 obrazovaniya). Moscow, Atomizdat, 1965. 321 p. illus., biblio.
 Errata slip inserted. 1100 copies printed.

TOPIC TAGS: deposit formation, epigenetic theory, exodiagenetic
 deposit, surface uranium accumulation, uranium bituminous deposit,
 uranium deposit, uranium, nuclear fuel. 17

PURPOSE AND COVERAGE: This book is intended for readers specializing
 in the geology of ore deposits, in particular for those concerned
 with atomic raw materials, and also for students of higher-educat-
 ion institutions. In the book, for the first time in Soviet and
 foreign literatures, the epigenetic theory of uranium-deposit
 formation is expounded. Many Soviet and foreign source materials

Card 1/4

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13

have been used in this book, and some of the investigations carried out by the present authors are published in this book for the first time. Several names of Soviet scientists working in this field are mentioned. V. A. Uspenskiy collaborated on Ch. I, and M. A. Vinelkina on Ch. III. The authors thank A. A. Saukov, deceased, Corresponding Member Academy of Sciences USSR, and F. I. Vol'fson, D. G. Sapozhnikov, V. I. Gerasimovskiy, M. P. Stralkin, G. S. Gritsavenko, and I. P. Kushnarev, Doctors of Geologico-Mineralogic Sciences; V. I. Danchev, Candidate of Geologico-Mineralogic Sciences, and N. A. Volokovykh. There are about 12 pages of references of which about 3/4 are Soviet.

TABLE OF CONTENTS {abridged}:

Introduction -- 4

Ch. I. Epigenetic processes in hypergenesis zone -- 9

Ch. II. Chemistry and crystallochemistry of uranium compounds -- 22

Card 2/4

L 50177-65
AH5014982

- 0
- Ch. III. Associations of nonoxidized uranium minerals in epigenetic deposits -- 37
 - Ch. IV. Uranium in surface and ground waters -- 48
 - Ch. V. Uranium in stratal waters -- 57
 - Ch. VI. Classification of exogenous uranium deposits -- 83
 - Ch. VII. Exodiagenetic deposits (Type 5) -- 113
 - Ch. VIII. Deposits of Oxygenous sheet oxidation (Type 6) -- 133
 - Ch. IX. Deposits of oxygen-free oxidation (Type 7). Deposits in oil-bearing carbonate rocks -- 180
 - Ch. X. Uranium-bituminous deposits in nonmetamorphosed sedimentary rocks -- 215

Card 3/4

L 50199-65
AN5014982

Ch. XI. On surface uranium accumulations in regions with arid climate -- 232

Ch. XII. Zone of oxidation in epigenetic deposits -- 239

Conclusion -- 275

References -- 309

AVAILABLE: Library of Congress

SUB CODE: ES

SUBMITTED: 04Feb65

NO REF SOV: 188

OTHER: 118

Card 4/4

ACC NR: AR6023251

SOURCE CODE: UR/0044/66/000/003/V068/V068

AUTHOR: Strelko, R. S.

TITLE: Use of digital computers for solution of economic problems with multiple correlational methods

SOURCE: Ref. zh. Matematika, Abs. 3V294

REF SOURCE: Sb. nauchn. tr. In-t ekon. i organiz. prom. proiz-va Sib. otd. AN SSSR, vyp. 7, 1963, 42-52

TOPIC TAGS: economics, digital computer, correlation statistics, computer technique

ABSTRACT: The increasing role of correlational methods in analyses of economic problems is noted. Use of these methods involves processing of a large amount of statistical material. The use of digital computer techniques increases the amount of input and output data. The work done in this field is described. [Translation of abstract] I. Fokin

SUB CODE: 05, 09

UDC: 51:330.115

Card 1/1

S/C73/62/028/002/002/006
B101/B110

AUTHORS:

Vysotskiy, Z. Z., Divnich, L. F., Strelko, V. V.

TITLE:

Influence of the degree of preliminary dehydration of hydrogels and of water-vapor pressure in the drying process on the structure of forming silicic-acid xerogels

PERIODICAL:

Ukrainskiy khimicheskiy zhurnal, v. 28, no. 2, 1962, 156-161

TEXT: The present investigation includes (1) the influence of preliminary dehydration of silicic-acid hydrogels on the rate of formation of their pore structure in benzene vapor; (2) the influence of water-vapor pressure, P_{H_2O} , on the structure of silicic-acid xerogels at room temperature and below; and (3) the influence of aging on structure formation. Results: (a) Silica gel dried in air at room temperature possessed a low static adsorptive capacity (21.8%) for benzene. Hydrogels dehydrated by 80-90% possessed at higher adsorptive capacity (39-58%). Dehydration up to 96.7% does not affect their static activity. The influence of C_6H_6 manifests itself in widening pores and in an increasing specific sorption volume.

Card 1/3

S/073/62/028/002/002/006
B101/B110

Influence of the degree of ...

(b) The pore diameter and the sorption volume of the xerogel increase with an increase in P_{H_2O} , to which also a longer drying period corresponds.

When dried over P_2O_5 ($P_{H_2O} = 2 \cdot 10^{-5}$ mm Hg), xerogel washed in H_2O (pH ~ 8) had a static activity of 60.7% for C_6H_6 after 26 days which increased to 71.6% with xerogel dried over dilute H_2SO_4 (specific gravity 1.22; $P_{H_2O} = 13$ mm Hg) for 75 days. (c) Hydrogel samples kept in water for 31,

80, or 102 days showed a density of 1.052, 1.065, and 1.080 g/cm³, and a water content of 882, 832, and 824% by weight, respectively. Accordingly aging also takes place under water. (d) A new method of obtaining silica gels is to prevent aging by drying at a low temperature. Drying over silica gel, aluminogel, $CaCl_2$, and concentrated H_2SO_4 at 0°C or at room temperature showed that the xerogels obtained at 0°C had almost completely lost their ability to adsorb benzene (1.5-4.2%), while they still adsorbed 16.4-21.5% of water vapor. This effect is attributed to the formation of ultrapores. There are 5 figures and 3 tables.

Card 2/3

Influence of the degree of ...

S/073/62/028/002/002/006
B101/B110

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN USSR
(Institute of Physical Chemistry imeni L. V. Pisarzhevskiy
AS UkrSSR)

SUBMITTED: May 24, 1960

Card 3/3

S/020/62/145/006/014/015
B106/B144

Polycondensation of acetaldehyde on ...

of silica gel is heated, the conjugations of the C=C double bonds are destroyed by oxidation and diene-type synthesis. The polymer structures, and thereby the course of polycondensations, were confirmed by e.p.r. and IR absorption spectra. The e.p.r. signals show that the polyenes form a temperature-dependent reversible donor - acceptor complex with the silica gel surface, which is destroyed by heating and restored by cooling. Adsorption experiments with methanol and water vapors, performed on silica gel containing the polycondensate, showed that the polymer does not completely block the pores of silica gel. It is assumed that part of the polymer molecules are linked with the macroradicals $\equiv\text{Si}-\text{O}\cdot$ and $\equiv\text{Si}\cdot$ which form by a radical mechanism during the desiccation of the gel through rupture of the siloxane bonds between the micelles. Silica gels with similar properties also form from hydrogels desiccated in vinyl acetate vapors is hydrolyzed of vinyl acetate to acetic acid and acetaldehyde which decomposes to polyene aldehydes. Silica gels containing polymers with conjugated double bonds, are suitable for use as active fillers which simultaneously act as acceptors of free radicals. There are 3 figures. The most important English-language reference is: E. R. Blout, M. Fields, R. Karplus, J. Am. Chem. Soc., 70, 194 (1948).

Card 2/3

GRAGEROV, I. P.; PONOMARCHUK, M. P.; STRELKO, V. V.; GANYUK, L. N.;
VYSOTSKIY, Z. Z.

Free radical formation in benzocquinhydrone and phenazohydrin
on solid surfaces studied by the electron paramagnetic
resonance method. Dokl. AN SSSR 147 no.4:867-869 D '62.
(MIRA 16:1)

1. Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN
UkrSSR. Predstavleno akademikom M. I. Kabachnikom.

(Quinhydrone) (Phenazine) (Radicals(Chemistry))

STRELKO, V.V.; GANYUK, L.N.; VISOTSKIY, Z.Z.

Appearance of paramagnetism during adsorption of anthracene
by dehydrated aluminosilicate, silica gel, and alumina gel.
Ukr. khim. zhur. 29 no.4:363-365 '63. (MIRA 16:6)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN
UkrSSR.

(Anthracene) (Adsorption)
(Electron paramagnetic resonance and relaxation)

STRELKO, V.V.; GUSHCHIN, P.P.; VYSOTSKIY, Z.Z.

Interaction of certain amino compounds with silica gels
subjected to dehydration. Dokl. AN SSSR 153 no.3:619-621
N '63. (MIRA 17:1)

1. Institut fizicheskoy khimii im. I.V. Pisarzhevskogo AN
SSSR. Predstavleno akademikom V.A. Karginym.

L 25771-65 EWT(π)/EFF(c)/EWP(t)/T/EWP(j)/EWP(b)/EWP(c)/Pr-4 IJP(c)/RPL

JD/JW/MLK/RM

ACCESSION NR: AT5002662

S/0000/64/000/000/0066/0079

41
28
B+1

AUTHOR: Strelko, V. V.; Vysotskiy, Z. Z.

TITLE: The polycondensation reaction of some monomers on the surface of dehydrated silicagels 27

SOURCE: AN UkrSSR. Institut khimii vysokomolekulyarnykh soyedineniy. Sintez i fiziko-khimiya polimerov; sbornik statey po rezul'tatam nauchno-issledovatel'skikh rabot (Synthesis and physical chemistry of polymers; collection of articles on the results of scientific research work). Kiev, Naukova dumka, 1964, 66-79

TOPIC TAGS: polycondensation, silicagel, dehydrated silicagel, acetaldehyde polymer, ethanolamine polymer, ethyleneimine polymer, amino acid polymer, vapor phase polymerization, infrared spectrum, electron paramagnetic resonance, polypeptide synthesis

ABSTRACT: Polycondensation of selected monomers on the surface of dehydrated silicagel was studied to demonstrate the feasibility of polymerizing adsorbed compounds with the continuous removal of one reaction product, i.e., water. Polycondensation of acetaldehyde, ethanolamine, ethylene imine, and of a glycine-leucine mixture was studied in the vapor phase or with aqueous solutions or liquid monomers. The reactions, except those of the amino acids and some of

Card 1/2

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4

ACCESSION NR: AT5002662

ethanolamine, were carried out at room temperature. Polycondensation from the vapor phase involved placing a Petri dish with the monomer and one with silica xerogel or hydrogel in a desiccator containing CaCl_2 or another drying agent. The reaction products formed were studied by infrared and EPR spectroscopy, and the change in adsorber porosity was investigated by adsorption tests. Even at room temperature, acetaldehyde formed polyene-aldehyde with conjugated systems and a considerable chain length, producing an intensive EPR signal. A paramagnetic donor-acceptor system was shown to be formed and reversibly destroyed at higher temperature. Ethanolamine was converted to polyethyleneimine with terminal hydroxyl- and amino-groups, and polyethyleneimine was also readily formed from its monomer. The reaction of ethyleneimine on the surface of fine-porous silicagel in aqueous solution followed by drying of the adsorber produced an adsorber with selective adsorption properties. Equimolar mixtures of glycine and leucine at 100C yielded a polypeptide. "The authors thank A. Faynerman for determining the molecular weight of polyene-aldehyde." Orig. art. has: 8 figures and 6 formulas.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN UkrSSR
(Physical chemistry institute, AN Ukr SSR)

SUBMITTED: 22Jun64

ENCL: 00

SUB CODE: OC

Card 2/2 NO REF SOV: 014

OTHER: 005

L 40008-65 ENT(m)/EPF(c)/EPA(w)-2/ENP(j)/T Pc-4/Pr-4/Pab-10 RM/RWH/WW/GS
S/0000/64/000/000/0019/0022

ACCESSION NR: AT4049838

AUTHOR: Strelko, V. V.; Vysotskiy, Z.Z.; Ganyuk, L. N.

TITLE: Degradation of polymers formed by the reaction of gaseous monomers with dehydrated hydrogels of silicic and aluminosilicic acids

SOURCE: Khimicheskiye svoystva i modifikatsiya polimerov (Chemical properties and the modification of polymers); sbornik statey. Moscow, Izd-vo Nauka, 1964, 19-22

TOPIC TAGS: polymer degradation, hydrogel, silicic acid, aluminosilicic acid, adsorption isotherms, xerogel, water polystyrene, polyvinylacetate, silica gel, thiophene

ABSTRACT: The following experimental methods were used in this study: 1) Dehydration of the hydrogels of silicic and aluminosilicic acids in vapors of readily polymerizable monomers, such as styrene and vinyl acetate, as well as the difficultly polymerizing thiophene and CCl_4 , which is a good chain transfer agent of radical reactions; 2) Electron paramagnetic resonance spectra of the products of the reaction of the vapors or organic substances with dehydrated gels; 3) Adsorption isotherms of methanol vapors by dehydrated xerogels at 20C in a vacuum apparatus of the McBain type; 4) Water repellency tests; 5) Determination of the content of organic polymers in the gels by annealing in air at 850C after removing

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ACCESSION NR: AT4049838

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the monomer and the soluble polymer fractions. Adsorption isotherms were plotted for methanol vapors on styrene silicagel obtained in air, nitrogen and CCl_4 , as well as for control samples, and then for methanol vapors on aluminosilicagel, obtained in styrene and vinyl acetate vapors, and on a control gel. It was found that on drying in CCl_4 vapors, the surface of dehydrated hydrogels, especially in the last stages of dehydration, acquire chemically active groups of a radical type. The dehydrated gels react rapidly with CCl_4 at room temperature. The polymerization of the monomer, the chemical transformations in the pores of inorganic gels and the subsequent degradation of the polymer chains are apparently initiated by the macroradicals $\equiv \text{Si}^\bullet$ and Si-O^\bullet , formed by the mechanical-chemical rupture of the interparticle siloxane bonds during the contraction of the gel and by the rupture of the stressed siloxane bonds on the surface of the elementary particles of the xerogel. The polymer systems investigated are of great interest for the synthesis of non-swelling ion-exchange resins as well as active fillers which have the properties of free-radical acceptors. "Yu. P. Polishchuk helped in the synthesis of some of the samples." Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Institut fizicheskoy khimii AN Ukr.SSR (Physical chemistry institute, AN Ukr.SSR)

SUBMITTED: 03May62

ENCL: 00

SUB CODE: JC, GC

Card 2/2 pr NO REF SOV: 014

OTHER: 007

L 51866-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 GS/RM

ACCESSION NR: AT5092663

S/0000/64/000/000/0080/0082

AUTHOR: Strelko, V. V.; Vysotskiy, Z. Z.

25
24
B+1

TITLE: Polymerization of thiophene on the surface of silica gel during dehydration of the latter

SOURCE: AN UkrSSR. Institut khimii vysokomolekulyarnykh soyedineniy. Sintez i fiziko-khimiya polimerov; sbornik statey po rezul'tatam nauchno-issledovatel'skikh rabot (Synthesis and physical chemistry of polymers; collection of articles on the results of scientific research work). Kiev, Naukova dumka, 1964, 80-82

TOPIC TAGS: thiophene polymerization, polythiophene synthesis, silica gel dehydration, active filler, infrared spectrum

ABSTRACT: The authors investigated the room-temperature polymerization of thiophene in the adsorption layer of a silicic acid xerogel during dehydration of the latter. Their analysis of infrared spectra of the polymerization product indicated that polymerization of thiophene under such conditions proceeds with the ring remaining unbroken. The polythiophene obtained has a chain of conjugated double bonds. It is suggested that silica gels containing polymers such as poly-

Card 1/2

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ACCESSION NR: AT5002663

thiophene in their pores can be used as active fillers with inhibitor properties.
Orig. art. has: 2 figures and 3 formulas.

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo AN UkrSSR
(Institute of Physical Chemistry, AN UkrSSR)

SUBMITTED: 22Jun64

ENCL: 00

SUB CODE: OC,OC

NO REF SOV: 004

OTHER: 001

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Card 2/2